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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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7590

02/22/2005

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EXAMINER

JONES, PRENELL P

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/814,374

Applicant(s)

MOON, BILLY G.

Examiner

Prenell P Jones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-11, 13, 15-20, 22, 24-28, 30 and 32-36 is/are rejected.
- 7) ☒ Claim(s) 4, 12, 14, 21, 23, 29 and 31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/01, 10/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Specification

1. The disclosure is objected to because of the following informalities: On page one of the specification Applicant has left out the Application numbers which are cross reference to related Application.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 8-11, 13, 18-20, 22, 28 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider in view of Rathonyi et al.

Regarding claims 1, 2, 9-11, 18-20, 28 and 36, Schneider discloses (Abstract, Figure 2, 8A, col. 4, line 9-67, col. 5, line 13-28, col. 7, line 8-51, col. 16, line 28-67, col. 17, line 42-48, col. 15, line 9-56) providing telephony Internet services in a wireless communication wherein data received is coded and the architecture includes a plurality of BTS coupled to a packet switched network, MSC, BSC, mobile unit and Gateway interfaces which includes a router, traffic data is selectively routed via a packet switched network, BTS or MSC performs decoding

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encoded digital samples and packetizing samples into data packets to recover original samples, BTS outputting data stream carrying embedded voice samples, performing error correction and detection, packets are assigned by the router, MSC selectively routes samples to appropriate BTS for encoding, modulation and transmission to mobile stations, BTS generates samples, voice data, gateway interface also performs packetizing and routing samples, (col. 17, line 28-31) destination identifier associated with packet, (col. 16, line 37 thru col. 17, line 48) collect samples with respect to destination address, (col. 4, line 9-42) data packets communicated to corresponding destination and (col. 12, line 35-55) transcoder forwards samples to MSC for routing. Schneider is silent on packet selection as associated with redundant information and selected information associated with the BTS. In a wireless communication system which performs decoding as associated with redundant information, Rathonyi discloses (Abstract, col. 2, line 26-43, col. 6, line 35-64) GSM wireless communication system wherein the architecture includes communication among mobile station, MSC, BSC and BTS, whereby decoding of packet data is performed, redundant information is utilized to successfully complete decoding data, data packets are selected (packet selection) on the basis of packet size associated with data rate to maximize throughput (rate), (col. 4, line 42-67) soft combining of information, BTS uses selected information to transmit packets as associated in the decoding process, (col. 10, line 51-60) only one packet per frame is transmitted (one packet selected), (col. 5, line 32-41) channel error characteristic C/I affects throughput measurements, (col. 14, line 22-30, col. 15, line 41-67) new information added with transmitted information (selected information) is used to increase probability of successful decoding, and information such as sequencing numbering (packet identifier), packet size, transmission rate can be performed at the transceiver. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to be motivated to implement data selection and using selected data to improve

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decoding with respect to a wireless communication system as taught by Rathonyi with the teachings of Schneider for the purpose of further providing successful decoding and minimizing decoding attempts, in addition to insuring quality communication.

Regarding claim 3, 13, 22 and 30, as indicated above, Rathonyi discloses (Abstract, col. 2, line 26-43, col. 6, line 53-64) GSM wireless communication system wherein the architecture includes communication among mobile station, MSC, BSC and BTS, whereby decoding of packet data is performed, redundant information is utilized to successfully complete decoding data, data packets are selected (packet selection) on the basis of packet size associated with data rate to maximize throughput, BTS uses selected information associated with packets as associated in the decoding process, (col. 10, line 51-60) only one packet per frame is transmitted (one packet selected), (col. 5, line 32-41) channel error characteristic C/I affects throughput measurements, (col. 14, line 22-30, col. 15, line 41-67) new information added with transmitted information (selected information) is used to increase decoding, and information such as sequencing numbering (packet identifier), packet size, transmission rate can be performed at the transceiver.

Regarding claim 8, as indicated above, Rathonyi discloses (Abstract, col. 2, line 26-43, col. 6, line 35-64) GSM wireless communication system wherein the architecture includes communication among mobile station, MSC, BSC and BTS, whereby decoding of packet data is performed, redundant information is utilized to successfully complete decoding data, data packets are selected (packet selection) on the basis of packet size associated with data rate to maximize throughput (rate), (col. 4, line 42-67) soft combining of information, BTS uses selected information to transmit packets as associated in the decoding process, (col. 10, line 51-60) only

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one packet per frame is transmitted (one packet selected), (col. 5, line 32-41) channel error characteristic C/I affects throughput measurements, (col. 11, line 15-67, col. 14, line 22-30, col. 15, line 2-67) new information added with transmitted information (selected information) is used to increase probability of successful decoding, and information such as sequencing numbering (packet identifier), packet size, transmission rate (metrics) can be performed at the transceiver and values for metric are determined.

3. Claims 5-7, 15-17, 24-27 and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider in view of Rathonyi et al as applied to claims 1, 3 above, and further in view of Xu.

Regarding claims 5-7, 15-17, 24-27 and 32-35, as indicated above, Schneider discloses (Abstract, Figure 2, 8A, col. 4, line 9-67, col. 5, line 13-28, col. 7, line 8-51, col. 16, line 28-67, col. 17, line 42-48, col. 15, line 9-56) providing telephony Internet services in a wireless communication wherein data received is coded and the architecture includes a plurality of BTS coupled to a packet switched network, MSC, BSC, mobile unit and Gateway interfaces which includes a router, traffic data is selectively routed via a packet switched network, BTS or MSC performs decoding encoded digital samples and packetizing samples into data packets to recover original samples, BTS outputting data stream carrying embedded voice samples, performing error correction and detection, packets are assigned by the router, MSC selectively routes samples to appropriate BTS for encoding, modulation and transmission to mobile stations, BTS generates samples, voice data, gateway interface also performs packetizing and routing samples, (col. 17, line 28-31) destination identifier associated with packet, (col. 16, line 37 thru col. 17, line 48) collect samples with respect to destination address, (col. 4, line 9-42)

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data packets communicated to corresponding destination and (col. 12, line 35-55) transcoder forwards samples to MSC for routing, Rathonyi discloses (Abstract, col. 2, line 26-43, col. 6, line 35-64) GSM wireless communication system wherein the architecture includes communication among mobile station, MSC, BSC and BTS, whereby decoding of packet data is performed, redundant information is utilized to successfully complete decoding data, data packets are selected (packet selection) on the basis of packet size associated with data rate to maximize throughput (rate), (col. 4, line 42-67) soft combining of information, BTS uses selected information to transmit packets as associated in the decoding process, (col. 10, line 51-60) only one packet per frame is transmitted (one packet selected), (col. 5, line 32-41) channel error characteristic C/I affects throughput measurements, (col. 14, line 22-30, col. 15, line 41-67) new information added with transmitted information (selected information) is used to increase probability of successful decoding, and information such as sequencing numbering (packet identifier), packet size, transmission rate (metrics) can be performed at the transceiver. However, Schneider and Rathonyi are silent on Viterbi decoder. In analogous art, Xu discloses (Abstract, col. 1, line 1 thru col. 3, line 8, col. 7, line 1-9) generation and transmission of coding, encoding and decoding whereby the architecture includes MSC, BTS and BSC as associated in a GSM wireless system, reducing error rate of decoded data can permit information to be transmitted with less interference, redundancy information is contained in symbol sequences, decoding and CRC are performed, symbols contain redundant information (col. 5, line 38 thru col. 7, line 52) redundant information contained in symbol sequences are associated with bit mapping which is selected in correlation between binary values of corresponding bit positions of large frames, binary values associated with redundant information is used to control and improve decoding and GSM wireless system, (col. 7, line 41-43) Soft output Viterbi Algorithm (SOVA) decoders which provides soft decision. Therefore, it would have been obvious to one of

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ordinary skill in the art at the time of the invention to be motivated to implement SOVA decoder as taught by Xu into the BTS device of both Schneider and Rathonyi since the BTS performs the decoding for the purpose of optimizing the decoding performance in a digital data transmission system employing FEC code.

Allowable Subject Matter

4. Claims 4, 12, 14, 21, 23, 29 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Although the prior art discloses providing telephony Internet services in a wireless communication wherein data received is coded and the architecture includes a plurality of BTS coupled to a packet switched network, MSC, BSC, mobile unit and Gateway interfaces which includes a router, traffic data is selectively routed via a packet switched network, BTS or MSC performs decoding encoded digital samples, performing error correction and detection, packets are assigned by the router, MSC selectively routes samples to appropriate BTS for encoding, modulation and transmission to mobile stations, BTS generates samples, voice data, gateway interface also performs packetizing and routing samples, destination identifier associated with packet, collect samples with respect to destination address, redundant information is utilized to successfully complete decoding data, data packets are selected (packet selection) on the basis of packet size associated with data rate to maximize throughput (rate), soft combining of information, BTS uses selected information to transmit packets as associated in the decoding process, only one packet per frame is transmitted, channel error characteristic C/I affects throughput measurements, and information such as sequencing numbering (packet identifier), packet size, transmission rate (metrics) can be performed at the transceiver, redundant

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information contained in symbol sequences are associated with bit mapping which is selected in correlation between binary values of corresponding bit positions of large frames, Soft output Viterbi Algorithm (SOVA) decoders which provides soft decision they fail to teach or suggest selected packet content used as input to a noise algorithm and determine in response to receiving selection information, the differences between the decoded content included in the packet selected by the router and the decoded content included in a corresponding packet communicated from the base station and adjusting the decoding process to correct for any difference.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prenell P. Jones whose telephone number is 571-272-3180. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Prenell P. Jones

February 7, 2005

